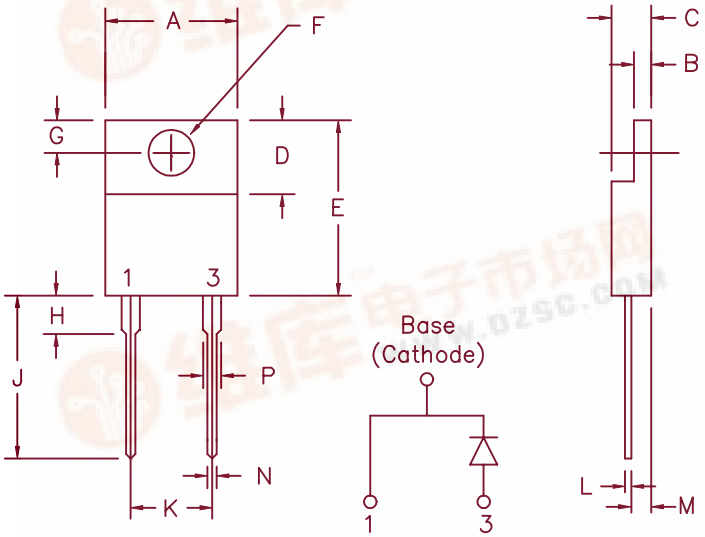
Ultra Fast Recovery Rectifiers

UF830 — UF850



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.155	3.53	3.94	Dia.
G	.100	.120	2.54	3.05	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.025	0.35	0.63	
M	.080	.115	2.03	2.92	
N	.028	.038	0.71	0.96	
P	.045	.055	1.14	1.40	

Similar to TO-220AC

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
UF830	300V	300V
UF840	400V	400V
UF850	500V	500V

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- V_{RRM} 300 TO 500 Volts
- 8 Amps current rating
- t_{RR} 50 nsec maximum

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 8 Amps	T_C = 155°C, Square wave, $R_{\theta JC}$ = 2°C/W
Maximum surge current	I_{FSM} 150 Amps	8.3ms, half sine, T_J = 175°C
Max peak forward voltage	V_{FM} 1.2 Volts	I_{FM} = 8A: T_J = 25°C *
Max reverse recovery time	t_{RR} 50 ns	1/2A, 1A, 1/4A, T_J = 25°C
Max peak reverse current	I_{RM} 1 mA	V_{RRM}, T_J = 125°C
Max peak reverse current	I_{RM} 10 μA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 28pF	V_R = 10V, T_J = 25°C

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	−55°C to 175°C
Operating junction temp range	T_J	−55°C to 175°C
Max thermal resistance	$R_{\theta JC}$	2.0°C/W Junction to Case
Mounting torque		10−15 inch pounds
Weight		0.08 ounces (2.3 grams) typical

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Figure 1
Typical Forward Characteristics

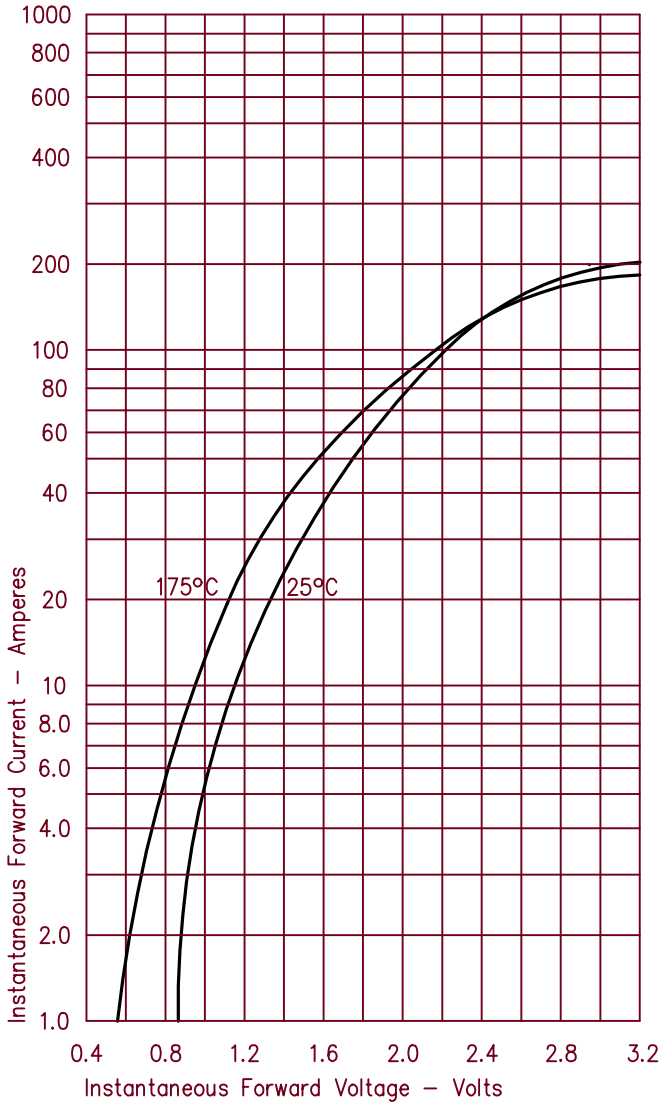

Figure 3
Typical Junction Capacitance

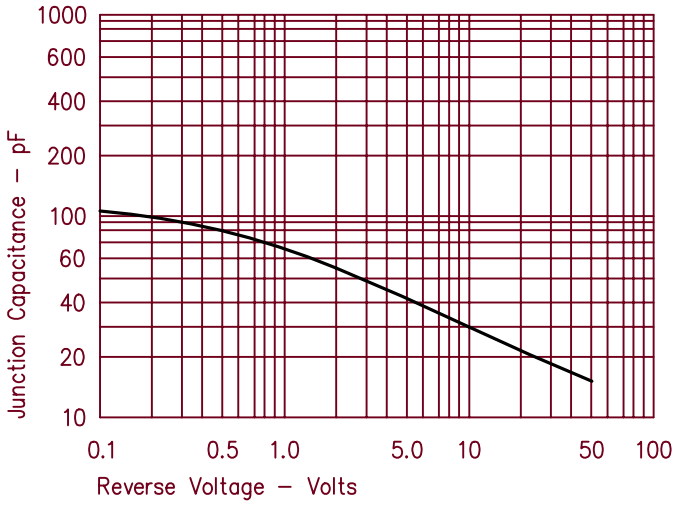

Figure 4 60° 90° 120° 180° DC
Forward Current Derating

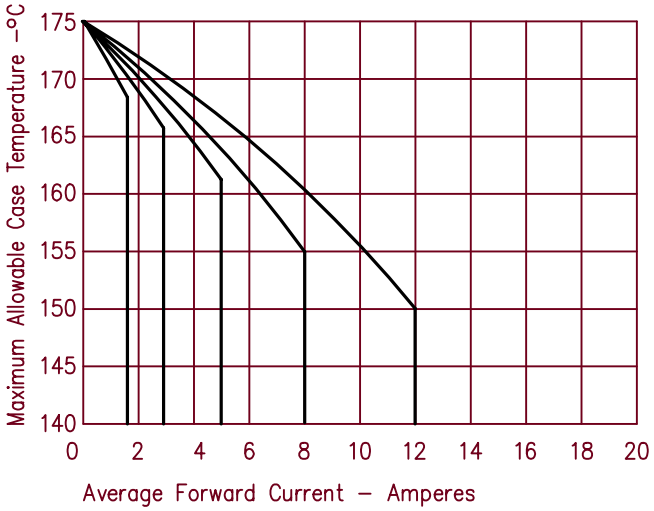

Figure 2
Typical Reverse Characteristics

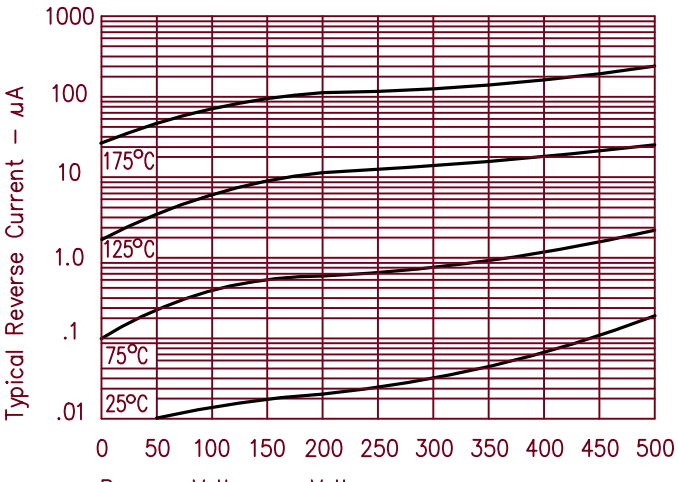

Figure 5
Maximum Forward Power Dissipation – Per Leg